

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

1-38. Cancelled

39. (New) A UV curable coating composition which is abrasion resistant, comprising:

- a) trimethylolpropane triacrylate in an amount between about 5% and about 85% by weight of the composition,
- b) hexandiol diacrylate in an amount between about 1 and about 30% by weight of the composition,
- c) silica nanoparticles in an amount between about 30 and about 50% by weight of the composition and wherein at least about 50% of the silica nanoparticles are present as a premix with trimethylolpropane triacrylate, and
- d) at least one photoinitiator which absorbs only in the UV range of the electromagnetic spectrum; and

wherein a coating of the UV curable coating composition maintains about 95% or higher of its post-cure gloss when subjected to about 100 cycles of grade 3 steel wool with a load of about 50 lbs applied per Federal Specification FF-W-1825.

40. (New) The UV curable coating composition of Claim 39, wherein the trimethylolpropane triacrylate is present in an amount between 5-69% by weight of the composition.

41. (New) The UV curable coating composition of Claim 39, wherein the silica nanoparticles have a particle size in the range of 1 to 1,000 nm.

42. (New) The UV curable coating composition of Claim 39, wherein the silica nanoparticles

have a particle size of less than about 50 nm.

43. (New) The UV curable coating composition of Claim 39, wherein the silica nanoparticles are present in a colloidal dispersion with the curable acrylates of the composition.

44. (New) The UV curable coating composition of Claim 39, wherein the silica nanoparticles are spherical, non-porous, amorphous, non-agglomerated and monodispersed.

45. (New) The UV curable coating composition of Claim 39, wherein the silica nanoparticles have a particle size range of about 10 nm to about 50 nm.

46. (New) The UV curable coating composition of Claim 39, further comprising a reactive diluent.

47. (New) The UV curable coating composition of Claim 46, wherein the reactive diluent is N,N-dimethyl acrylamide.

48. (New) The UV curable coating composition of Claim 39, further comprising at least one light stabilizer.

49. (New) The UV curable coating composition of Claim 48, wherein at least one light stabilizer is selected from the group consisting of hindered amine light stabilizers, hydroxyphenyltriazines, hydroxybenzotriazoles, and combinations thereof.

50. (New) The UV curable coating composition of Claim 39, wherein the composition has a viscosity of about 5 to about 3000 cps.

51. (New) An abrasion resistant road reflector comprising at least one surface with a coating thereon of a composition comprising:

- a) trimethylolpropane triacrylate in an amount between about 5% and about 85% by weight of the composition,
- b) hexandiol diacrylate in an amount between about 1 and about 30% by weight of the composition,
- c) silica nanoparticles in an amount between about 30 and about 50% by weight of the composition and wherein at least about 50% of the silica nanoparticles are present as a premix with trimethylolpropane triacrylate, and
- d) at least one photoinitiator which absorbs only in the UV range of the electromagnetic spectrum; and

wherein the coating maintains about 95% or higher of its post-cure gloss when subjected to about 100 cycles of grade 3 steel wool with a load of about 50 lbs applied per Federal Specification FF-W-1825.